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Taiwan

Solid Wood Products

Annual

2003

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Report Highlights:

Taiwan imports of wood in most categories bounced back in 2002 from historic lows reached the previous year. Taiwan uses wood primarily for interior design / finishing; concrete casting, outdoor recreational infrastructure, and as packing material. The recovery in solid wood purchases was boosted both by new sources of demand (e.g., increasing use of wood in local government beautification projects, and new construction near planned high speed rail stations, etc.) and from pent-up demand in key traditional wood buying segments such as interior design and packing material. In contrast, imports and exports of finished wood products such as furniture fell significantly because of tepid demand in key export markets (the US, among others) and the unwillingness of the average Taiwanese household to make major nonessential purchases during times of economic uncertainty. Continued import growth of wood products will depend on a sustained recovery in Taiwan's overall economy.

Includes PSD changes: Yes
Includes Trade Matrix: Yes
Annual Report
Taipei ATO [TW2], TW

Executive Summary

Historically, Taiwan was both a major producer of quality hardwoods and a regional center for wood products manufacturing. However, elimination of most of the island's commercially valuable timber and the flight of wood processing industries to lower cost labor markets radically changed both the amount and composition of Taiwan's wood consumption within the space of only a decade.

With a population focused on sacrifice, work, and frugal living since the 1950s, Taiwan authorities spent much of the 1990s struggling to increase leisure time and raise the quality of life. The Taiwan workweek has, in the space of several years, shrunk from 48 to 40 hours and the government is backing an island-wide effort to make Taiwan a more "leisure-friendly" place. Community zoning rules are being updated - with businesses gradually relocating out of residential communities. Municipal and national parks are disposing of cement and steel in favor of wood benches, viewing platforms, and shade trees; and national infrastructure projects are greatly improving access to the wealth of activities available beyond Taiwan's crowded cities. As a result of these changes, Taiwan is gradually maturing into a market for leisure products and services, including furniture, interior design products, and decorative products.

The quality of life issue and increasing wealth have also increased interest in wood products. With a large middle class, estimated average household income of NT$1.1 million (US$32,000), and a growing propensity to invest in personal leisure, people on Taiwan have money to spend on comfort and higher quality products. In the home, increased average living space, growing levels of individual home ownership, and an increasing interest in upgrading home interiors is also boosting spending on home improvements.

There is also a small but growing demand for 2x4 and timber frame construction from affluent individuals and resort/recreation area developers. In early 2003, Taiwan approved revisions to the building code that now permit wood products to be used as main structural members in residential and commercial construction. These revisions generally conform to US construction standards and give Taiwan developers, for the first time, a regulatory framework within which to develop multiple-family and commercial properties using structural wood (2x4 and post-and-beam). This is a key step forward in attempt to encourage middle- and upper-middle class home buyers to consider purchasing a wood frame home as their first or second home. Although the fire code awaits a final revision, these changes should boost demand for structural wood in public, commercial, and multi-family developments in the years to come.

While wood will likely never eclipse other materials such as concrete for structural use and will face tough competition from other materials in furniture, flooring, and other applications, an increasing appreciation of the value and beauty of wood, coupled with the means to pay for products, makes Taiwanese consumers natural targets for US exporters. Guided by appropriate marketing strategies, exporters of US wood and wood products should find good opportunities for sales growth into Taiwan.

The ATO is dedicated to assisting US exporters of agriculture products to compete in overseas markets. To learn more about this market and find local trade contacts, you are welcome to make use of our resources here in Taiwan. For inquiries regarding forest products, please contact the ATO office in Taipei via the following: e-mail: ATO@mail.ait.org.tw; fax: (886.2) 2706.4885; phone: (886.2) 2705.6536.

Production

FOREST RESOURCES

The island of Taiwan is nearly 60 percent covered by forests (2.0 million hectares). For much of the 20th century, both the logging industry and wood exports contributed significantly to the island's GDP. Felled virgin stands of cypress, fir, camphor, and oak helped fund Japan's development up through the Second World War (Taiwan was under Japanese rule from 1895 to 1945) and provided essential hard currency exports for the Nationalist Chinese government after its retreat from Mainland China to the island in 1949. Although virtual elimination of high-value virgin stands eventually ground the island's logging industry to a halt, Taiping Shan, Taiwan's last major logging district, managed alone to generate 93,000 m^3 of felled timber as late as 1959.

The excessive harvesting of virgin timber, escalating labor costs, an aging labor force, and a growing appreciation of the importance of forests in the ecosystem have resulted in diminishing harvests. In 1992, Taiwan authorities banned all logging in "natural" timber stands (whether virgin or regrowth) outside plantations. The ban is believed effective apart from cases of illicit felling / removal of individual logs of high-value wood (e.g., camphor, red and yellow cypress, and Taiwan zelkova, among others). Outside natural timber stands, Taiwan's commercial forestry industry only harvests around 50,000 m^3 per year. The peacock pine (willow fir or *cryptomeria japonica*), China fir (*cuninghamia laceolata*), and Taiwan acacia (*acacia confusa*) are the three most commonly cultivated species.

From a commercial standpoint, the quality of both natural and plantation stands in Taiwan is considered generally poor - a testimony to the unbridled exploitation of formerly rich forest resources during the past century and to a recent history of reforestation efforts that, in many cases, replanted using species poorly suited to existing soil and climate conditions. A recent Taiwan Forestry Research Institute (TFRI) study estimated that 70 percent of all plantation trees in Taiwan had trunks measuring between 10 and 30 cm in diameter[1]. Most of the annual harvest is currently channeled into low value applications, with over 1/4 of output volume used as firewood. TFRI continues to conduct research into using Taiwan wood in higher value applications (including oriented strand fiber boards, plywood backing, and plastic/wood composite materials) although results are not expected to spur significant expansion of land under commercial cultivation.

Despite of its large quantity of standing timber, the potential for Taiwan to increase production of wood much beyond current levels is minimal due to a diverse set of factors, including environmental regulations, low import prices, labor flight to higher paying sectors (in a recent survey of the forestry industry in Taipei county, only 20 percent of those employed in the sector were below the age of 40), and the long-term investment required (78 percent of privately held commercial forest land in Taipei County was inherited by the current owners).

[1] Ten China fir trees, all around 30 years of age, felled for a separate 1999 study revealed an average trunk diameter of 25 cm and an average ring growth rate of 5.5mm per year.

- FOREST AREA -

Country: Taiwan Report Year: 2003	2002	2003	2004
Total Land Area (million hectares)	3.59	3.59	3.59
Total Forest Area (million hectares)	2.00	2.01	2.01
--of which, Commercial ('000 hectares) (a)	0.50	0.50	0.50
----of commercial, tropical hardwood ('000 hectares)	negligible	negl.	negl.
----of commercial, temperate hardwood ('000 hectares)	0.04	0.04	0.04
----of commercial, softwood ('000 hectares)	0.34	0.34	0.34
Forest Type			
--of which, virgin ('000 hectares) (b)	1,570.00	1,565.00	1,560.00
--of which, plantation ('000 hectares) (c)	430.00	435.00	439.00
--of which, other commercial (regrowth) ('000 hectares)	0.20	0.20	0.20
Total Volume of Standing Timber (thousand cubic meters)	330,000.00	330,000.00	330,000.00
--of which, Commercial Timber ('000 cum)	n/a	n/a	n/a
Annual Timber Removal ('000 cum) (d)	53.00	54.00	50.00
Annual Timber Growth Rate ('000 cum)	n/a	n/a	n/a
Annual Allowable Cut ('000 cum)	200.00	200.00	200.00

(a) includes approximately 130ha. used to extract firewood.
(b) includes regrowth that is not protected or otherwise not earmarked for commercial harvest.
(c) includes reforestation done for both commercial and non-commercial purposes.
(d) includes removal for firewood / other non-commercial purposes

SOLID WOOD PRODUCTS SITUATION and OUTLOOK

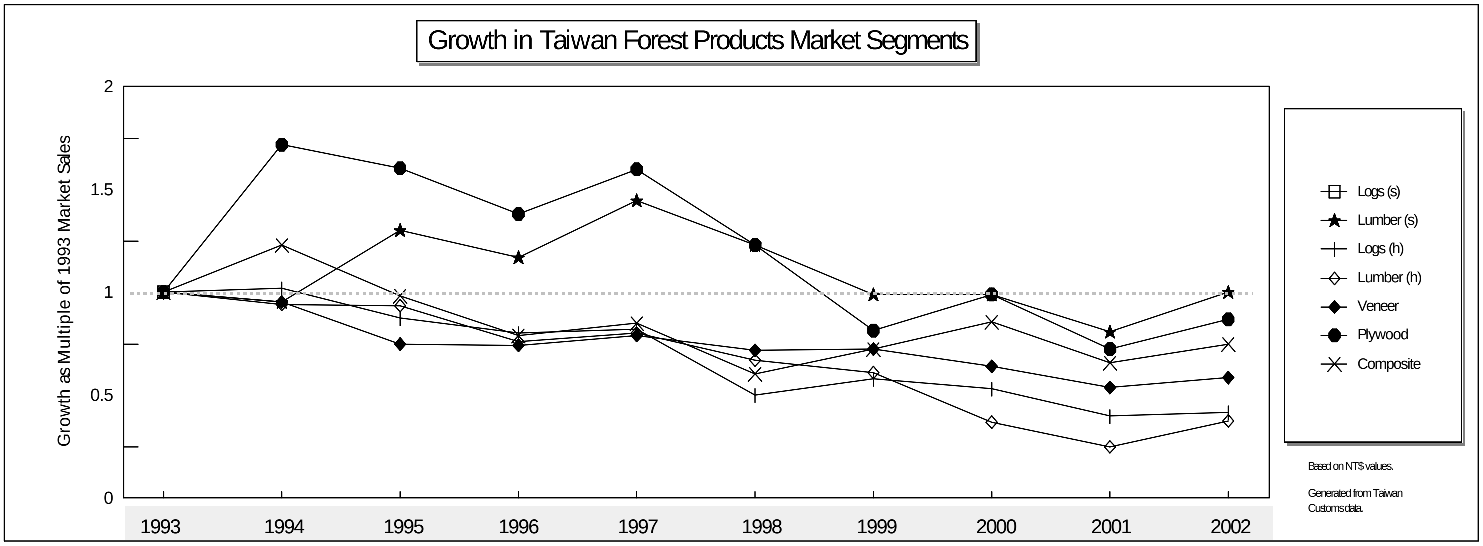
Although most timber is now off limits to commercial exploitation, supporting industries in Taiwan which once processed local wood remain strong, with many Taiwan-based companies now important players in the Asia regional and global trade in lumber and lumber products. Initially, Taiwan firms manufacturing lumber, paper, furniture, and decorative wood products, shifted from using locally-sourced to using imported raw materials. As labor and other operating costs rose steadily through the 1980s and 1990s, *most* shifted some or all production offshore. The most common destinations now for Taiwanese investments in wood processing is China (focused on Guangdong Province), followed by Vietnam, the Philippines, and other Southeast Asian countries.

Asia Wood Purchase Decisions Still Centered in Taiwan: While much production has relocated offshore, key operational decisions in Taiwan-invested factories (regarding such issues as installed equipment, order receipt / scheduling, changes to capacity, and raw material purchases [including wood]) tend to remain in the hands of Taiwan-based executives. Based on this practice, and estimating that roughly 1/3 of China, Vietnam, and Philippine furniture exports benefit from Taiwan investment, the power of Taiwanese log and semi-finished wood buyers greatly exceeds the value of direct trade to Taiwan or measures of Taiwan’s wood furniture production.

According to survey data updated in 1999, approximately 2,000 firms are licenced to operate wood processing / production facilities in Taiwan. A majority are small (for example, approximately 2/3 of all furniture makers employ 10 staff or less) and many likely have most or all production overseas. Taiwan has 769 furniture manufacturers, 498 lumber manufacturers, 185 plywood manufacturers, 39 "composite" wood products manufacturers (e.g., flooring, special-use composite woods), 84 wood container manufacturers (e.g., crates, jewelry boxes, storage boxes), and 912 firms manufacturing "other" wood products.

Trade

OVERVIEW and OUTLOOK



Slightly over US$900 million worth of wood and wood products (under HS code 44 [excluding furniture]) cleared Taiwan Customs during 2002, a 7.6 percent rise over 2001 levels but still less than half the $1,925 million which arrived in 1993. A general preference toward siting wood processing operations offshore rule coupled with continued anxieties about the domestic economy rule out any serious rise in broad-based demand for either finished or raw material wood products in the coming 2~3 year period.

However, a general consensus from industry is that the market has likely reached a bottom. Industry sources believe the market is approaching minimum demand levels required to satisfy ongoing input or replacement needs. Indeed, key segments such as softwood lumber (used for packing material, cement construction braces, interior design framing, and wood frame structures), plywood, and temperate hardwood lumber (mostly used in furniture, flooring, and wood product manufacturing) show signs returning to modest growth over the next several years due because of rising factory orders and a slowly improving local economy.

During 2002, exporters of furniture and wood consumer products continued to suffer from weak US market demand in tandem with other Asian exporting economies. Taiwan exports of furniture made of wood fell 19 percent during 2002 are set for another 5~10 percent drop in 2003. Exports can only be expected to pick up with a recovery in US market demand which accounts for upwards of 3/4 of Taiwan's wood furniture exports.

Exports of all non-furniture wood and wood products during 2002 registered US$286 million, a mild decline from the previous year mostly because of increasing Taiwan investments offshore.

The bulk of Taiwan's wood imports continue to be low-value softwood lumber and plywood destined for industrial uses and hardwood paneling and veneers used for decorative purposes.

Hardwoods: Both Taiwan and Chinese cultures appreciate the aesthetic value of hardwoods and, as incomes rise and quality of life issues increase in importance, families are increasingly likely to purchase hardwood interior decoration products including parquet flooring, wall panels, solid wood dining tables, and other decorative items. Temperate and tropical hardwood species seem to be equally well received by consumers.

For most hardwood market segments, consumer preferences should be carefully researched before undertaking market entry. For example, better than 90 percent of dining tables sold in Taiwan are round, meaning poorer prospects for square or rectangular tables. At the same time, the rapidly growing market for rectangular wood tile parquet flooring is particularly hungry for tiles made of species not currently sold in volume in Taiwan. Demand for do-it-yourself (DIY) products is still relatively shallow and extends little beyond assembling simple furniture out of a box or laying down flooring tiles from a kit (popular now include wood tile "squares" of around 2 ft^2, each square containing a number of pre-assembled and glued wood floor tiles). However, DIY demand is expected to grow and become more sophisticated, meaning increasing market opportunities for more sophisticated DIY kits over the coming years. The time for market contact and development work, however, is now.

<u>A Note on Flooring</u>: The profitable local parquet flooring industry manufactures wood flooring tiles to a standard 1.5cm (finished) thickness. Flooring lumber exporters able to offer rough hardwood lumber in approx. 1.7cm (unfinished) thickness specifications will help minimize processor waste and provide an important edge over competing suppliers. The 1.5cm (finished) standard is also widely used in China, Japan, and other Asian markets for domestic consumption.

With a well-developed regional wood processing network and growing demand for wood furniture and decorative products (particularly designed to Chinese/Asian-specifications), the highest value sector should continue to be semi-processed wood products, such as hardwood dimension lumber and hardwood veneer. Such intermediate products can be final processed at facilities in Taiwan or elsewhere, ensuring products meet local market expectations and leveraging lower labor costs.

Softwoods: Much of the softwoods imported into Taiwan continue to come in as plywood and dimension lumber. A significant percentage of dimension lumber is consumed by the construction industry to create the temporary supports and casts around which cement is poured to form building foundations, frames, and walls. Around 95 percent of new buildings, both residential and commercial are constructed of reinforced concrete (RC). Plywood sheets are used in many applications including interior decoration, as backing for billboards and signs, and as facing on temporary structures. This is a high volume and low unit-value segment.

The market for wood frame and "D-log" homes remains in its infancy. However, changes in consumer attitudes and government policies offer good potential for growth in this sector over the coming years. Note that the ferocious Formosan termite and Taiwan's humid climate underscore a need for pressure treated wood in nearly all outdoor / structural applications. Laminated wood imports from the US grew again in 2002 and is believed to be largely attributable to higher value glue-laminated (glulam) beams. With concerted effort on the part of industry, this positive trend is likely to continue.

Stable economic growth coupled with a rising income base can be expected, over the coming 3 - 5 years, to return healthy growth in demand for imported finished wood products (including the "high end" furniture, DIY, hardwood flooring, and other decorative products where US makers have competitive strength). Positive regulatory changes should also boost prospects for treated softwood lumber for wood-frame construction (single and multiple dwelling homes, small business / academic office buildings, glulam long-span structures, and park / recreational area structures). Imports of items in these categories have grown significantly in value over the past decade in comparison with other forest products. Demand for plywood and second-grade softwood lumber should also pick up with any re-ignition of the traditional (reenforced concrete) construction sector.

COMPETITION

As with many sectors in Taiwan, price is frequently *the* key driver in purchasing decisions. US competitiveness has been boosted recently due to a decline in value of the dollar vis a vis key competitors in Europe for softwoods (veneers, framing lumber, etc.) and cost increases for some tropical hardwoods.

Taiwan importers tend to be familiar with the range of wood products available and major supplier countries. End-users typically rely upon importers for such information. This makes the importer the principal "gatekeeper" -- one who heavily influences which wood species to promote from which suppliers. While Taiwan/Chinese preferences tend toward darker tropical hardwoods, availability concerns, rising prices, and recent fashion trends toward lighter / brighter wood colors have helped diversify applications into US hardwoods such as maple, cherry, oak, and others.

Competition to supply traditional market segments (such as logs, plywood, veneer, furniture, decorative, etc.) focuses heavily on relationship-building and price negotiations due to the strength of Taiwan importers. Since most wood and wood products may be imported from Mainland China US exporters will also need to successfully compete with PRC firms. However, in new product areas, such as wood frame housing and wide-span structural (glulam) wood construction, education and promotional efforts not only present opportunities to develop significant new export revenue but are absolutely essential to address local market constraints including architect/builder unfamiliarity with wood construction principles and consumer concerns regarding the longevity and safety of wood frame vs. concrete structures (e.g., performance against termites, rot, fire, and other elements).

During 2002, the US and Canada sponsored programs for Taiwan construction authorities. The activities presented and explained international regulatory standards for wood frame construction and wood materials and promoted development of a wood frame housing market in Taiwan to architects and builders.

MARKET DEVELOPMENT STRATEGIES

Manage customer relations well and know your competition: Taiwan remains a price competitive market for both business-to-business and retail consumer transactions. Although a well-developed relationship with a Taiwan buyer should help secure sales as price buffer against competing suppliers, in general the purchase price is likely to be a recurring topic of discussion, unless you supply a unique product or have other specific advantages. To address price concerns effectively, maintain a good understanding of what competitors can (and cannot) provide in terms of products and services as well as of your own products and services.

A small circle of a dozen or so importers handles most log and lumber imports. Most have historical roots in Taiwan's early logging industry and are typically private, family-controlled enterprises. This makes relationship-building and responsiveness to client requests exceptionally valuable tools in building and securing log/lumber exports into this market (and - as noted above - to China, Vietnam, and other markets).

Education: Use of structural wood is expected to continue to increase, under its own inertia, slowly over the coming 5-year period, fueled by individual developers' exploitation of niche opportunities. International industry and association support of promotion and basic skill training programs will be, however, essential to position wood as an effective challenger to reinforced concrete (RC) and steel in the large number of proposed and ongoing recreation infrastructure projects (*100s of projects of varying sizes are planned at national, county, and local levels*), in the market for single home / low-rise apartment community developments (*10~30 per year*), and in the market for vacation hotel / retreat construction (*estimate 50 new and renovated hotels / retreats to be finished between 2002 and 2005*).

In interior design and furniture production segments, US suppliers are encouraged to assist Taiwan buyers (agents and importers) to better understand the range of temperate hardwoods available and wood performance characteristics.

Due to the "local" nature of most wood end-users in Taiwan (and Greater China), exporters and associations are encouraged to prepare and print promotion and education materials in Chinese for broadest coverage. When limited to preparing materials in one Chinese character format only, traditional Chinese (rather than simplified) is still deemed the format most widely accepted in both Taiwan and China.

Ecolabeling: At present, consumer awareness / concern regarding sustainable forest management practices is in its infancy, especially when product cost increases as a result. While increasing environmental awareness is increasing the potential to sell premiumvalued ecolabeled wood products, success will require significant up front investment in brand development. The Taiwan authority does not have an active certification or labeling program to recognize wood harvested from sustainably managed sources. To date, the international home products chain B&Q (UK) is the only supplier of wood products (lumber, outdoor furniture, parquet floor tiles, etc) into the market that requires suppliers to certify that wood is sourced from well-managed forests (as certified by the Forest Stewardship Council). Their success with sales to date is believed attributable as much to their unique position in the marketplace (the only DIY superstore) as to consumer preference for the FSC label.

Market Segment Analyses

CONSTRUCTION SECTOR

Overview

Spending by central, county, and local governments was a principal factor stabilizing and boosting demand for solid wood products. Successful beautification projects done over the past five or so years in places such as Hualien, I-Lan, and Nantou are now being replicated around the island, spurring demand for treated SYP and western species for outdoor applications. The trend seems set to continue through the next year or so with local governments securing and implementing budgets for civic improvement projects in the run-up to local and national elections.

US suppliers and associations can do more to educate local architects and officials on how to use wood, instead of concrete, in the numerous beautification and recreational infrastructure projects budgeted each year.

Continued doubt regarding the near-term economic outlook, a relatively high rate of multiple home/apartment ownership, and the large inventory of available housing in the suburbs of major metropolitan areas are factors which currently weigh upon the construction sector and promise to continue doing so through the foreseeable future. The single bright spot is the flurry of construction which is now going up near the future stops of Taiwan's high speed rail (currently under construction). Public and private construction linked to the high speed rail project, coupled with several particularly large single-building projects in Taiwan's metropolitan areas, accounted for more than half of building licenses issued during 2002.

Uncertainties regarding the long-term value of real estate holdings, an uptick in the number of mortgage defaults, and a relatively high level of multiple residence ownership (i.e., family owns more than one house or apartment) led to a continued erosion of real estate sale prices around the island in 2002. Kaohsiung was worst hit, with one survey conducted by a large local bank showing a drop in property (actual transaction) values of over 10 percent from the previous year. Central and Northern Taiwan urban areas have seen more mild drops of 0.5 percent and 1.5 percent, respectively. A drift downward in transaction prices coupled with historically low terms offered by banks, backed by the government, for first time home purchases is showing some success at encouraging renters to become home owners. In general, there is nothing on the foreseeable horizon that would spur a sustainable rise in property prices. Prices may be expected to see further drops or remain the same over the coming several years.

The combination of lower prices and attractive interest rates is likely to help primarily sales of apartments in already-constructed reinforced concrete (RC) / steel girder buildings and to improve slightly demand for new high rise construction in suburban areas. While wood used in interior design should benefit as a result, structural wood should not experience any particular benefit from these trends.

- CONSTRUCTION MARKET -

Country: Taiwan **Report Year: 2003**	**2002**	**2003**	**2004**
Total Housing Starts (thousand units)	25	30	34
--of which, wood frame (thousand units)	1	1	1
--of which, steel, masonry, other materials (thousand units)	25	29	33
--of total starts, residential (thousand units)	15	19	22
----of residential, single family (thousand units)	1	1	2
----of residential, multi-family (thousand units)	14	18	21
--of total starts, commercial (thousand units)	11	11	12
Total Value of Commercial Construction Market ($US mil)	4,200	4,900	5,700
Total Value of Repair and Remodeling Market ($US million)	n/a	n/a	n/a

Authorities issued 25,268 building licenses during 2002 to construct 23,071,345 m^2 in new floor space. These represent 14 percent and 46 percent increases, respectively, over the previous year, but remain well off the recent peak of 86,539 licenses to construct 76,436,000 m^2 of floor space issued during 1992. A significant factor contributing to the sharp swing upward in applications in 2002 is the residential and commercial construction planned in conjunction with Taiwan's high speed rail line. The knock-on effects of high speed rail construction should continue for several years.

Also during 2002, 22,753 licenses were issued permitting occupancy / use of 24,381,876 m^2 of new building space; down 20 percent and 3 percent from the previous year, respectively.

In spite of Taiwan's continuing economic problems, orders for wood frame homes, D-log cabins, glulam wide-span structures, and outdoor recreational and park facility constructions continue to grow, based on reports from Taiwan wood construction industry sources. Wood frame construction is expected to benefit in the near term from policy changes, some already implemented, that put structural wood on an equal footing with concrete and steel in the regulations.

Marketing

Taiwan holds little prospect of becoming a huge export market for wood frame construction because of the generally high price of land, a predilection toward urban living, and a host of entrenched builder and consumer suspicions about wood structures. However, convergence of several factors highly favorable to wood frame construction make prospects bright for steady and healthy growth. These positive growth factors include (1) increasing awareness regarding earthquake resistance / safety of wood frame versus reenforced concrete structures, (2) the glut of unimaginative, cookie-cutter residential complexes of reenforced concrete currently on the market, (3) quality-of-life expectations amongst the top 5-10 percent of Taiwan society that may include consideration of a vacation or second home constructed of wood, and (4) the successful approval and construction of wood-frame homes and other buildings based on building codes recently altered to accommodate wood frame structures.

Demand for wood frame single family and multi-storey townhouse dwellings is greatest in three principal market segments, namely (1) vacation homes for those in Taiwan's top income bracket, (2) residential developments executed on the outskirts of major urban centers (designed in wood for a particular purpose such as earthquake resistance or practical appeal to an overseas-educated middle class), and (3) principal homes for families in rural areas. If these three opportunity areas were aggressively developed, the resulting market potential is estimated to be an additional 1,750 housing units built within a 3 to 4-year time frame with steady growth afterward.

To realize the above market potential requires that material suppliers and their Taiwan partners provide initial development projects with practical technical and educational support. Lack of general architect and builder familiarity with wood frame construction techniques is the key supply-side constraint and consumer unfamiliarity with structural wood "products" is the key demand-side constraint to stronger market growth. The latter includes consumer concerns regarding structural wood covering fire safety ("wood burns, concrete does not"), rot and insects ("wood homes deteriorate quickly in Taiwan's environment"), typhoon resistance, and so on. Concerns can be minimized, and contrasted with the many problems associated with reenforced concrete, through appropriately-designed education and promotion programs.

Policy

The Ministry of Interior's Construction and Planning Administration (CPA) is responsible for drafting and implementing construction regulations and standards. Revisions to building codes published in 1996 and revised in 2003 permit construction of wood and timber frame structures of 4 storeys (14 meters) or less[2]. Structures of greater height can be built, but plans require special CPA review and approval.

Inspection and approval of completed structures fall under the jurisdiction of the county (or municipality) in which a building has been constructed.

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[2] Relevant regulatory documents include "Technical Construction Code" (CPA, January 2000 revision) and "Technical Standards for Wood Frame Building Design and Construction" (CPA, May 2003 revision)

Bringing Wood to the Masses: Underscoring commitments to make Taiwan a "greener" island and less vulnerable to frequent tremors, Taiwan authorities have partially completed an update of building codes with the stated objective of classifying wood as a "normal" construction material -- on a par with steel and concrete. While long approved, in practice, for constructing single family homes, structural wood was proscribed from use in multi-family or scale developments without special central government committee approval. This was due to fire code regulations which forbad the use of *any* "flammable" material as a load-bearing member.
The revised building code was approved in the spring of 2003, albeit without a finalized methodology for determining fire resistance. As of the new code's date of announcement (1 May 2003) builders in Taiwan are permitted to proceed with construction of multiple home residential communities and townhouse developments provided that individual residential units are separated either by a suitably wide open space or a non-wood fire barrier (firewall). The as yet unresolved issue of calculating fire resistance for either 2x4 or timber frame structures continues to require that plans for public buildings (such as office / shopping structures, auditoriums, and other such enclosed structures) must be approved by the central government's construction committee prior to construction and use.

The current fire code permits developers to construct legally multiple home wood frame developments and should gradually remove the previous reluctance (due to lack of legal framework) of banks to finance such projects and insurance companies to cover residences approved under the new code.

Taiwan construction industry officials are in the process of researching fire code revisions to incorporate wood structures. Research and draft code submissions to the CPA are expected in late 2004.

The slow economy and newness of the regulations are expected to hinder any burst of activity with multi-home developments in wood. However, a number of developers already have draft plans to use structural wood for both townhouse and single home residential communities when the economic situation again warrants.

Passage of the Agriculture Development Act in January 2000 opened the door to convert around 160,000 hectares of working farmland[3] to non-agricultural (including residential) use. This new regime eliminates the long-standing ban on farmland re-zoning and should open up substantial tracts of prime real estate around the island to commercial development. Officials have paced conversion work initially at around 6,000 ha. per year. Already many recreational farm developments (*nong she*) have been set up to attract domestic tourism. Most use wood (treated SYP, redwood, etc.) in outdoor facilities and some have / are using structural wood in their main buildings. Opportunities are significant in this sector for both wood suppliers and architects able to provide consulting services on optimal landscaping and structural designs.

[3] The Council of Agriculture was reported to have set this number as a target.

FURNITURE and INTERIORS SECTOR

Overview

Taiwan has 769 registered furniture products manufacturers. Many specialize in certain woods, styles, or furniture items. In addition to local manufacturing, Taiwan has significant investment interests in furniture and wood products production overseas.

Lower consumer spending and high outward investment by Taiwan consumer products manufacturers to set up production operations offshore resulted in sharply lower levels of imports and exports of furniture from previous levels.

Faced with tightened budgets for elective purchases, consumers are likely to delay purchases of new furniture or, if new furniture is necessary, purchase less expensive units. A reignition of furniture buying, particularly at the higher end must wait for a solid recovery in the overall domestic economy.

FURNITURE & INTERIORS MARKET

Country: Taiwan Report Year: 2003	2002	2003	2004
Total Housing Starts (number of units)	25,268	30,000	34,000
Total Number of Households)	6,650,000	6,670,000	6,670,000
Furniture Production ($US million)	529	510	500
Total Furniture Imports ($US million)	72	65	80
Total Furniture Exports ($US million)	290	300	300
Interiors Market Size ($US million)	n/a	n/a	n/a

Marketing

The furniture business, along with other well-established wood processing industries, relies on importers for information on wood species, performance characteristics, and availability. As nearly all are small-scale producers in Taiwan, few (if any) firms purchase wood directly from exporters; relying instead on importers for supplies of lumber and other semi-finished wood products.

Therefore, supporting importer efforts to provide furniture-maker customers with information on species, production techniques, and design trends has proven an effective approach to expanding furniture, and interior design segment, sales.

Policy

The combination of high relative labor costs and tightening environmental protection conditions will continue to encourage Taiwan’s furniture makers to send production overseas. Less impacted by labor costs, the higher value categories of furniture will continue to be produced in Taiwan and Taiwan will continue to have a broad base of furniture "manufacturers" that focus principally on assembling furniture components manufactured overseas.

Trade

Taiwan’s imports of wood furniture and parts[4] during 2002 totaled US$100 million, a decrease of 10 percent over 2001. Analysts believe Taiwan’s annual demand should not fall much below this before turning around with a recovery of the economy.

MATERIALS HANDLING SECTOR

Overview

The materials handling sector in Taiwan is not formally tracked by production or consumption statistics. Based on an estimate from the Taiwan Lumber Association that over half the imports of second-grade spruce, pine, and fir (SPF) are used in material handling, market consumption during 2002 totaled roughly 130,000 m^3. The industry is expected to show 10~15 percent growth in 2003 due to an improving export outlook. Future growth will depend on solidification of an economic recovery.

MATERIALS HANDLING MARKET

Country: Taiwan **Report Year: 2003**	**2002**	**2003**	**2004**
Total Value of Industrial Output ($US million)	275,000	280,000	285,000
New Pallet Production (million units)	n/a	n/a	n/a

Wooden pallets are still preferred in the market due to low cost, despite the fact that Taiwan’s humid climate and termite problems make wood a less than ideal material. Damaged wooden pallets are not generally repaired due to Taiwan’s relatively high cost of labor. Wooden pallet scrap is either recycled as support / repair material or disposed of as garbage.

4 In certain import categories, products of wood are lumped together with those of cane, rattan, and bamboo materials.

Tables and Statistics

TARIFF RATE SCHEDULE FOR WOOD AND WOOD PRODUCTS

FOREST PRODUCT TARIFFS AND TAXES (percent)		Tariff	Tariff	Other		
TAIWAN	Product Description	2001	2002	Import	Total US$ Cost	Export
				Taxes/Fees	of Import (d)	Tax
4401	stems and roots, fuel wood, chips, bark, sawdust, and waste	0.0	0.0	0.4	0.4	0
4403	wood in the rough (all varieties)	0.0	0.0	0.4	0.4	0
4404	hoopwood, split poles, piles, pickets, and stakes	0.0	0.0	0.4	0.4	0
4405	sandalwood and other wood flours	0.0	0.0	0.4	0.4	0
4406	railway sleepers	0.0	0.0	0.4	0.4	0
4407	wood sawn or chipped lengthwise	0.0	0.0	0.4	0.4	0
4408	veneer and sheets for plywood	0.0	0.0	0.4	0.4	0
4409	edge/face shaped wood (as for parquet flooring, molding, etc.)	0.0	0.0	0.4	0.4	0
4410	wafer/particle board of wood	3.0	3.0	0.4	3.4	0
4411	fiberboard	3.0	3.0	0.4	3.4	0
4412a	4412 subcategories of UNFINISHED plywood or veneered/laminated wood panels, excepting subcategories 1910, 9221,and 9910	12.5	10.0	0.4	12.9	0
4412.1910	4412a with coniferous wood on both faces, each ply not exceeding 6mm	7.5	7.0	0.4	7.9	0
4412.9221 / 9910	other 4412a with coniferous wood on both faces	5.0	5.0	0.4	5.4	0
4412b	4412 subcategories of FINISHED plywood or veneered/laminated wood panels, excepting subcategories 1920, 9222,and 9920	17.0	15.0	0.4	17.4	0
4412.1920	4412b with coniferous wood on both faces, each ply not exceeding 6mm	10.0	9.2	0.4	10.4	0
4412.9222 / 9920	other 4412b with coniferous wood on both faces	7.5	7.5	0.4	7.9	0
4413	densified/compressed wood blocks, plates, strips, other shapes	2.5	2.0	0.4	2.9	0
4414	wooden frames for painting, photography, etc.	2.5	2.0	0.4	2.9	0
4415	wooden crates, drums, boxes, pallets, other	2.5	2.0	0.4	2.9	0
4416	staves, casks, barrels, vats, tubs, etc.	2.5	2.0	0.4	2.9	0
4417	wood handles, tools, etc.	2.5	2.0	0.4	2.9	0
4418	fitted wood structural products (doors, windows/frames, parquet panels, shuttering, shingles, cellular panels, other joinery/carpentry)	2.5	2.0	0.4	2.9	0
4419	bamboo chopsticks, wood kitchen/tableware	2.5	2.0	0.4	2.9	0

FOREST PRODUCT TARIFFS AND TAXES (Continued)		Tariff	Tariff	Other		
TAIWAN	Product Description	2001	2002	Import	Total US$ Cost	Export
				Taxes/Fees	of Import (d)	Tax
4420	wood statues/ornaments, marquetry, ornamental boxes, other furniture	2.5	2.0	0.4	2.9	0
4421	4421 subcategories covering wood clothes hangers, ships, braille boards, moulds/dies, and "other" articles of wood	2.5	2.0	0.4	2.9	0
4422	this category omitted from Taiwan tariff code	2.5	2.5	0.4	2.9	0
4423	this category omitted from Taiwan tariff code	2.5	2.5	0.4	2.9	0
4424	this category omitted from Taiwan tariff code	2.5	2.5	0.4	2.9	0
4425	this category omitted from Taiwan tariff code	2.5	2.5	0.4	2.9	0
9406	prefabricated buildings	8.0	8.0	0.4	8.4	0

(d) based on CIF landed value of US$100

PRODUCTION, SUPPLY, and DEMAND (PSD) MATRICES: by Product Group

SOFTWOOD LUMBER

PSD Table						
Country	Taiwan					
Commodity	Softwood Lumber				1000 CUBIC METERS	
	2002	Revised	2003	Estimate	2004	Forecast
	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]
Market Year Begin		01/2002		01/2003		01/2004
Production	11	9	0	10	0	10
Imports	450	553	455	620	0	675
TOTAL SUPPLY	461	562	455	630	0	685
Exports	20	18	21	20	0	20
Domestic Consumption	441	544	434	610	0	665
TOTAL DISTRIBUTION	461	562	455	630	0	685

Imports

Import Trade Matrix		in 1000 m3
Commodity	Softwood Lumber	
Time period	2001-2002	
Imports for:	2001	2002
U.S.	19	25.6
Others		
Canada	161.9	202.1
New Zealand	143.6	150
Chile	29.5	61.4
China	30.8	30
Total for Others	365.8	443.5
Others not Listed	66.4	83.5
Grand Total	451.2	552.6

Exports

Export Trade Matrix		in 1000 m3
Commodity	Softwood Lumber	
Time period	2001-2002	
Exports for:	2001	2002
U.S.	0	0
Others		
Japan	11.5	11.2
Hong Kong	3.6	2.4
Germany	2.4	1.7
Total for Others	17.5	15.3
Others not Listed	0	0
Grand Total	17.5	15.3

TEMPERATE HARDWOOD LUMBER

PSD Table						
Country	Taiwan					
Commodity	Temperate Hardwood Lumber				1000 CUBIC METERS	
	2002	Revised	2003	Estimate	2004	Forecast
	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]
Market Year Begin		01/2002		01/2003		01/2004
Production	2	2	2	2	0	2
Imports	360	407.3	360	490	0	510
TOTAL SUPPLY	362	409.3	362	492	0	512
Exports	20	20	20	20	0	20
Domestic Consumption	342	389.3	342	472	0	492
TOTAL DISTRIBUTION	362	409.3	362	492	0	512

Imports

Import Trade Matrix		in 1000 m3
Country	Taiwan	
Commodity	Temperate Hardwood Lumber	
Time period	2001-2002	
Imports for:	2001	2002
U.S.	51.7	54.7
Others		
Malaysia	167.4	209.4
Indonesia	61.2	40
Canada	22.6	22.9
Chile	10.3	14
China	9.7	13.9
Brazil	6	11.7
Total for Others	277.2	311.9
Others not Listed	35.4	40.7
Grand Total	364.3	407.3

Exports

Export Trade Matrix		in 1000 m3
Country	Taiwan	
Commodity	Temperate Hardwood Lumber	
Time period	2001-2002	
Exports for:	2001	2002
U.S.	0	0
Others		
Hong Kong	12.9	11.5
China	2.3	2.9
Vietnam	1	2.1
Total for Others	16.2	16.5
Others not Listed	3.4	3.5
Grand Total	19.6	20

TROPICAL HARDWOOD LUMBER

PSD Table						
Country	Taiwan					
Commodity	Tropical Hardwood Lumber				1000 CUBIC METERS	
	2002	Revised	2003	Estimate	2004	Forecast
	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]
Market Year Begin		01/2002		01/2003		01/2004
Production	1	1	0	1	0	1
Imports	56	42.6	58	35	0	32
TOTAL SUPPLY	57	43.6	58	36	0	33
Exports	9	11.3	8	10	0	10
Domestic Consumption	48	32.3	50	26	0	23
TOTAL DISTRIBUTION	57	43.6	58	36	0	33

Imports

Import Trade Matrix		in 1,000 m3
Country	Taiwan	
Commodity	Tropical Hardwood Lumber	
Time period	2001-2002	
Imports for:	2001	2002
U.S.	2	3.5
Others		
Indonesia	20	15
Burma	6.7	10
Malaysia	17.5	6.6
Brazil	1.7	2.5
China	1.7	2.4
Total for Others	47.6	36.5
Others not Listed	4.6	2.6
Grand Total	54.2	42.6

Exports

Export Trade Matrix		in 1,000 m3
Country	Taiwan	
Commodity	Tropical Hardwood Lumber	
Time period	2001-2002	
Exports for:	2001	2002
U.S.	0	0.4
Others		
Hong Kong	5.7	5.7
China	1.5	3.5
Total for Others	7.2	9.2
Others not Listed	1.4	2.1
Grand Total	8.6	11.7

HARDWOOD VENEER

PSD Table						
Country	Taiwan					
Commodity	Hardwood Veneer				1000 CUBIC METERS	
	2002	Revised	2003	Estimate	2004	Forecast
	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]
Market Year Begin		01/2002		01/2003		01/2004
Production	3	3	4	4	0	0
Imports	170	155	175	160	0	160
TOTAL SUPPLY	173	158	179	164	0	160
Exports	6	7.6	6	8	0	7.5
Domestic Consumption	167	150.4	173	156	0	152.5
TOTAL DISTRIBUTION	173	158	179	164	0	160

Imports

Import Trade Matrix		in 1000 m3
Country	Taiwan	
Commodity	Hardwood Veneer	
Time period	2001-2002	
Imports for:	2001	2002
U.S.	3.8	5.8
Others		
Malaysia	75.8	88.2
PNG	42	38
Brazil	8.2	7.9
Cambodia	5.4	1.8
Indonesia	5.4	5.7
Total for Others	136.8	141.6
Others not Listed	8.1	7.6
Grand Total	148.7	155

Exports

Export Trade Matrix		in 1000 m3
Country	Taiwan	
Commodity	Hardwood Veneer	
Time period	2001-2002	
Exports for:	2001	2002
U.S.	0	0
Others		
Hong Kong	4.3	4.9
China	0	1.2
Malaysia	0.7	1
Total for Others	5	7.1
Others not Listed	1.5	0.5
Grand Total	6.5	7.6

SOFTWOOD PLYWOOD

PSD Table						
Country	Taiwan					
Commodity	Softwood Plywood				1000 CUBIC METERS	
	2002	Revised	2003	Estimate	2004	Forecast
	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]
Market Year Begin		01/2002		01/2003		01/2004
Production	10	9	10	10	0	9
Imports	60	87.4	65	130	0	160
TOTAL SUPPLY	70	96.4	75	140	0	169
Exports	7	9	7	8	0	8
Domestic Consumption	63	87.4	68	132	0	161
TOTAL DISTRIBUTION	70	96.4	75	140	0	169

Imports

Import Trade Matrix		in 1000 m3
Country	Taiwan	
Commodity	Softwood Plywood	
Time period	2001-2002	
Imports for:	2001	2002
U.S.	0.1	0
Others		
China	44.7	62.9
Malaysia	14.9	14.4
Chile	1.1	2.4
Total for Others	60.7	79.7
Others not Listed	2.2	7.7
Grand Total	63	87.4

Exports

Export Trade Matrix		in 1000 m3
Country	Taiwan	
Commodity	Softwood Plywood	
Time period	2001-2002	
Exports for:	2001	2002
U.S.	0	0
Others		
China	0	2.3
Hong Kong	5	6
Total for Others	5	8.3
Others not Listed	1.4	0.7
Grand Total	6.4	9

HARDWOOD PLYWOOD

PSD Table						
Country	Taiwan					
Commodity	Hardwood Plywood				1000 CUBIC METERS	
	2002	Revised	2003	Estimate	2004	Forecast
	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]	USDA Official [Old]	Post Estimate [New]
Market Year Begin		01/2002		01/2003		01/2004
Production	5	5	0	5	0	5
Imports	460	535.6	470	655	0	700
TOTAL SUPPLY	465	540.6	470	660	0	705
Exports	65	48	70	50	0	50
Domestic Consumption	400	492.6	400	610	0	655
TOTAL DISTRIBUTION	465	540.6	470	660	0	705

Imports

Import Trade Matrix		in 1000 m3
Country	Taiwan	
Commodity	Hardwood Plywood	
Time period	2001-2002	
Imports for:	2001	2002
U.S.	0.1	0
Others		
Indonesia	289	278
Malaysia	137.6	174
China	35	73.6
Cambodia	3.9	4.3
New Zealand	0.5	2.6
Total for Others	466	532.5
Others not Listed	2.2	3.1
Grand Total	468.3	535.6

Exports

Export Trade Matrix		in 1000 m3
Country	Taiwan	
Commodity	Hardwood Plywood	
Time period	2001-2002	
Exports for:	2001	2002
U.S.	12.5	12.5
Others		
Hong Kong	27	17.5
UAE	2.9	5.5
Canada	2.4	4.5
Singapore	2.8	4.8
Total for Others	35.1	32.3
Others not Listed	1.4	3.2
Grand Total	49	48